Contents Volume 207 (1998/99)

Properties of peat-based casing soils and their influence on the water relations and growth of the mushroom *(Agaricus bisporus)*
R. Noble, A. Dobrovin-Pennington, C.E. Evered and A. Mead **1–13**

Comparison of methodologies for field measurement of net nitrogen mineralisation in arable soils
A. Bhogal, D.J. Hatch, M.A. Shepherd and S.C. Jarvis **15–28**

Residual effects of subsoil zinc and oilseed rape genotype on the grain yield and distribution of zinc in wheat
H.S. Grewal and R.D. Graham **29–36**

Evaluation of agar and agarose gels for studying mechanical impedance in rice roots
L.J. Clark, W.R. Whalley, R.A. Leigh, A.R. Dexter and P.B. Barraclough **37–43**

Influence of arbuscular mycorrhizal fungi and simulated acid rain on the growth and coexistence of the grasses *Calamagrostis villosa* and *Deschampsia flexuosa*
R. Malcová, M. Vosátka and J. Albrechtová **45–57**

Response of shoot growth and transpiration to soil drying in sugarcane
R.O. Nable, M.J. Robertson and S. Berthelsen **59–65**

Alleviation of water stress effects in cowpea by *Bradyrhizobium* spp. inoculation
M.V.B. Figueiredo, J.J. Vilar, H.A. Burity and F.P. de França **67–75**

Predominance of ecophysiological controls on soil CO_2 flux in a Minnesota grassland
J.M. Craine, D.A. Wedin and F.S. Chapin, III **77–86**

Phosphorus nutrition and water deficits in field-grown soybeans
F.H. Gutiérrez-Boem and G.W. Thomas **87–96**

Modelling partitioning between structure and storage in sugar beet: Effects of drought and soil nitrogen
A.R. Werker, K.W. Jaggard and M.F. Allison **97–106**

Post-drainage changes in vegetation composition and carbon balance in Lakkasuo mire, Central Finland
K. Minkkinen, H. Vasander, S. Jauhiainen, M. Karsisto and J. Laine **107–120**

Phosphorus nutrition of rice in relation to flooding and temporary loss of soil-water saturation in two lowland soils of Cambodia
V. Seng, R.W. Bell, I.R. Willett and H.J. Nesbitt **121–132**

Sodium and potassium uptake of rice panicles as affected by salinity and season in relation to yield and yield components
F. Asch, M. Dingkuhn, C. Wittstock and K. Doerffling **133–145**

***Rhizobium* strains that nodulate *Trifolium semipilosum* Fres. are phylogenetically distinct**
M. Tesfaye and F.B. Holl **147–154**

Significance and limits in the use of predawn leaf water potential for tree irrigation
T. Améglio, P. Archer, M. Cohen, C. Valancogne, F.-A. Daudet, S. Dayau and P. Cruiziat **155–167**

The effect of forestry drainage on vertical distributions of major plant nutrients in peat soils
R. Laiho, T. Sallantaus and J. Laine **169–181**

Sieve size effects on root length and biomass measurements of maize (*Zea mays*) and *Grevillea robusta*
S.J. Livesley, C.L. Stacey, P.J. Gregory and R.J. Buresh **183–193**

Influence of cultural practices on edaphic factors related to root disease in *Pinus* nursery seedlings
J. Juzwik, K.M. Gust and R.R. Allmaras **195–208**

An analytical microscopical study on the role of the exodermis in apoplastic $Rb^+(K^+)$ transport in barley roots
M. Gierth, R. Stelzer and H. Lehmann **209–218**

Changes in soil mineralogy and exchangeable cation pools in stands of Norway spruce planted on former pasture land
F. Nordborg and S. Olsson **219–229**

Volume contents **231–232**

Author index **233**